

CLAIMS

1. An information rearrangement method for rearranging information obtained from information sources connected via a network comprising:

an information collection step of collecting information from a predetermined number of registered sites;
an information element extraction step of extracting, from among said collected information, information elements that include the same facts that are referred to at multiple sites; and

a display step of displaying the contents of said extracted information elements while changing the display state of said contents in accordance with the number of sites whereat said facts are referred to.

2. The information rearrangement method according to claim 1, wherein, at said information element extraction step, said information elements that convey the same facts are extracted together with a set of keywords that represent said information elements.

3. The information rearrangement method according to claim 1, wherein, at said display step, a set of important information elements on a sentence level are extracted from a group composed of a predetermined number of sites, and the display for the same sets of important information elements is folded.

4. An information rearrangement method for rearranging information obtained from information sources connected via a network comprising:

an information collection step of collecting information from a predetermined number of registered sites;

an information element extraction step of extracting, from among said collected information, information elements that include the same facts that are referred to at multiple sites; and

a topic keyword extraction step of extracting a topic keyword that represents the entire set of information elements to be extracted; and

a display step of displaying the contents of said extracted information elements, while displaying said extracted topic keyword at a position different from the contents concerning said information elements.

5. The information rearrangement method according to claim 4, wherein, at said display step, when specific items are designated in said displayed topic keyword including multiple items, the contents concerning information elements that belong to a set of said specific items are displayed, and the contents concerning information elements that belong to a set of items that are not pertinent to said specific items are masked.

6. An information rearrangement method for rearranging information obtained from information sources connected via a network comprising:

an information collection step of periodically crawling a group of registered sites and collecting information;

an information element extraction step of extracting, from among a set of information elements at the individual sites in said group, information elements that convey the same facts; and

an importance level calculation step of providing an importance level in accordance with the number of sites that are referred to.

7. The information rearrangement method according to claim 6, wherein, at said information element extraction step, from new keywords that are revised by periodical crawling, said information elements that include the same facts are extracted while taking into account a matching level relative to a proper noun that can be the subject of said facts.

8. The information rearrangement method according to claim 6, wherein important information elements on the sentence level, for which an importance level is provided at said importance level calculation step, are rearranged in the descending order of their importance levels and are presented visually.

9. An information rearrangement method comprising the steps of:

extracting information elements from multiple sites;
determining whether, of said information elements

extracted from said multiple sites, there are relevant information elements that convey the same facts as sentence-level information elements that constitute an arbitrary web page; and

when said relevant information elements that include the same facts as said sentence-level information elements are present in said information elements obtained from said multiple sites, adding remark information to said sentence-level information elements to provide information concerning said arbitrary web page.

10. The information rearrangement method according to claim 9, wherein said web page with said added remark information is displayed, and said relevant information elements are displayed by designating said remark information.

11. An information rearrangement method for rearranging information obtained from information sources connected via a network comprising the steps of:

registering sites that are the favorites of users;
periodically crawling said registered sites;
registering data whose contents have been revised;
extracting, from said registered data, new keywords relative to information elements;

calculating important keywords from said extracted keywords;

extracting a set of sentence-level important information elements based on the matching level of said obtained important keywords; and

extracting a topic keyword based on a set of keywords that are provided for each of said sentence-level important information elements in said extracted set.

12. The information rearrangement method according to claim 11, wherein, from said important keywords, word-level important information elements are extracted that are ascertained to be important according to a determination reference as to whether an information element includes many words referred to at multiple sites.

13. An information processing apparatus for rearranging information obtained from information sources connected via a network comprising:

information collection means for collecting information from a predetermined number of registered sites;

information element extraction means for extracting, from among said collected information, information elements that include the same facts that are referred to at multiple sites; and

result display means for displaying the contents of said extracted information elements while changing the display state of said contents in accordance with the number of sites whereat said facts are referred to.

14. The information processing apparatus according to claim 13, wherein said result display means rearranges said information elements in the descending order of the numbers of sites that are referred to, and displays the contents of

said information elements.

15. The information processing apparatus according to claim 13, wherein said result display means displays sets of sentence-level important information elements that are extracted from a group of a predetermined number of sites, and folds and hides the same important information element sets.

16. An information processing apparatus for rearranging information obtained from information sources connected via a network comprising:

information collection means for collecting information from a predetermined number of registered sites;

information element extraction means for extracting, from among said collected information, information elements that include the same facts that are referred to at multiple sites;

topic keyword extraction means for extracting a topic keyword that represents the entire set of information elements to be extracted; and

display means for displaying the contents of said extracted information elements, while displaying said extracted topic keyword at a position different from the contents concerning said information elements.

17. The information processing apparatus according to claim 16, wherein, when specific items are designated in said displayed topic keyword including multiple items, said

display means displays the contents concerning information elements that belong to a set of said specific items, and masks the contents concerning information elements that belong to a set of items that are not pertinent to said specific items.

18. An information processing apparatus for rearranging information obtained from information sources connected via a network comprising:

information collection means for periodically crawling a group of registered sites and collecting information;

information element extraction means for extracting, from among a set of information elements at the individual sites in said group, information elements that convey the same facts; and

importance level calculation means for providing an importance level in accordance with the number of sites that are referred to.

19. The information processing apparatus according to claim 18, wherein said information element extraction means extracts, from new keywords that are revised by periodical crawling said information elements that include the same facts, while taking into account a matching level relative to a proper noun that can be the subject of said facts.

20. An information processing apparatus comprising:

means for extracting information elements from multiple sites;

means for determining whether, of said information elements extracted from said multiple sites, there are relevant information elements that convey the same facts as sentence-level information elements that constitute an arbitrary web page; and

means for, when said relevant information elements that include the same facts as said sentence-level information elements are present in said information elements obtained from said multiple sites, adding remark information to said sentence-level information elements to provide information concerning said arbitrary web page.

21. The information processing apparatus according to claim 20, further comprising:

means for displaying said web page with said added remark information; and

means for displaying said relevant information elements are displayed by designating said remark information.

22. An information processing system, for processing information obtained from multiple sites that are connected via a network, comprising:

a webcrawler, for crawling registered sites across a network;

a metadata DB (database), for storing metadata from which information elements are extracted from content referred to by using a URL;

an important information element extraction mechanism, for reading information stored in said metadata DB, and for

extracting important information elements based on the matching level of information elements;

an important information element DB, for storing said extracted important information elements; and

a result display mechanism, for visually presenting said stored important information elements.

23. The information processing system according to claim 22, wherein said important information element extraction mechanism includes

a keyword importance level calculation mechanism, for employing new keywords to calculate an importance level for each keyword, and

a sentence-level important information element extraction mechanism, for extracting, from a set of information elements that are calculated and sorted in the order of their importance level, important information elements at a sentence level based on the matching level as is related to facts.

24. A storage medium on which a computer-readable program is stored, which permits a computer to perform:

a process for collecting information from a predetermined number of registered sites;

a process for extracting, from among said collected information, information elements that include the same facts that are referred to at multiple sites; and

a process for displaying the contents of said extracted information elements while changing the display state of

said contents in accordance with the number of sites whereat said facts are referred to.

25. A storage medium on which a computer-readable program is stored, which permits a computer to perform:

a process for collecting information from a predetermined number of registered sites;

a process for extracting, from among said collected information, information elements that include the same facts that are referred to at multiple sites;

a process for extracting a topic keyword that represents the entire set of information elements to be extracted; and

a process for displaying the contents of said extracted information elements, while displaying said extracted topic keyword at a position different from the contents concerning said information elements.

26. A storage medium on which a computer-readable program is stored, which permits a computer to perform:

a process for periodically crawling a group of registered sites and collecting information;

a process for extracting, from among a set of information elements at the individual sites in said group, information elements that convey the same facts; and

a process for providing an importance level in accordance with the number of sites that are referred to.

27. A storage medium on which a computer-readable program

is stored, which permits a computer to perform:

a process for extracting information elements from multiple sites;

a process for determining whether, of said information elements extracted from said multiple sites, there are relevant information elements that convey the same facts as sentence-level information elements that constitute an arbitrary web page; and

a process for, when said relevant information elements that include the same facts as said sentence-level information elements are present in said information elements obtained from said multiple sites, adding remark information to said sentence-level information elements to provide information concerning said arbitrary web page.

28. A storage medium on which a computer-readable program is stored, which permits a computer to perform:

a process for registering sites that are the favorites of users;

a process for periodically crawling said registered sites, and registering data whose contents have been revised;

a process for extracting, from said registered data, new keywords relative to information elements;

a process for calculating important keywords from said extracted keywords;

a process for extracting a set of sentence-level important information elements based on the matching level of said obtained important keywords; and

a process for extracting a topic keyword based on a set of keywords that are provided for each of said sentence-level important information elements in said extracted set.

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